

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application. Please cancel claims 64, 66-75, and 80-83, and amend claims 60, 61, 63, 65, 76-79, 85, 87, 89, 91, 93, 95, 97, 99, 101, 103, and 105 as follows:

Listing of Claims:

1-59. (Cancelled)

60. (Currently Amended) A planarizing machine for planarizing microelectronic-device substrate assemblies, comprising:

a support table;

a polishing pad on the support table, the polishing pad having a body, a planarizing surface on the body, and a plurality of abrasive particles fixedly attached to the body at the planarizing surface;

a carrier assembly having a carrier head configured to hold a substrate assembly and a drive mechanism attached to the carrier head to move the carrier relative to the polishing pad; and

a non-abrasive lubricating planarizing solution without abrasive particles on the polishing pad, the lubricating planarizing solution having a viscosity of at least approximately 4 to approximately 100 cP ~~between 4-100 cP~~, wherein the non-abrasive lubricating planarizing solution further comprises homopolymers and copolymers of acrylic acid crosslinked with a polyalkenyl polyether .

61. (Currently Amended) A planarizing machine for planarizing microelectronic-device substrate assemblies, comprising:

a support table;

a polishing pad on the support table, the polishing pad having a body, a planarizing surface on the body, and a plurality of abrasive particles fixedly attached to the body at the planarizing surface;

a carrier assembly having a carrier head configured to hold a substrate assembly and a drive mechanism attached to the carrier head to move the carrier relative to the polishing pad;

a first container and a supply of a non-abrasive solution in the first container;

a second container and a supply of a non-abrasive lubricant-additive in the second container; and

a third container comprising a mixing site, the mixing site coupled to the first and second containers, the mixing site comprising an agitator configured to mix the lubricant-additive being mixed with the non-abrasive solution at the mixing site to produce a lubricating planarizing solution, and the mixing site being coupled to a nozzle to dispense the lubricating planarizing solution onto the polishing pad.

62. (Previously Presented) The planarizing machine of claim 60, wherein the non-abrasive lubricating planarizing solution further comprises glycerol mixed into a non-abrasive solution comprising an aqueous solution of ammonia.

63. (Currently Amended) The planarizing machine of claim 62, wherein the non-abrasive lubricating planarizing solution has a viscosity of at least approximately 10 to approximately 20 cP ~~between 10-20 cP~~.

64. (Cancelled)

65. (Currently Amended) The planarizing machine of claim ~~64~~60, wherein the non-abrasive lubricating planarizing solution has a viscosity of at least approximately 10 to approximately 20 cP ~~between 10-20 cP~~.

66.-75. (Cancelled)

76. (Currently Amended) The planarizing machine of claim 60, wherein the non-abrasive lubricating planarizing solution ~~further comprises homopolymers and copolymers~~

~~of acrylic acid crosslinked with a polyalkenyl polyether~~ is mixed into a non-abrasive solution comprising an aqueous solution of ammonia.

77. (Currently Amended) The planarizing machine of claim 76, wherein the non-abrasive lubricating planarizing solution has a viscosity of at least approximately 10 to approximately 100 cP ~~between 10-100 cP~~.

78. (Currently Amended) The planarizing machine of claim 60, wherein the ~~non-abrasive lubricating planarizing solution further comprises 0.25% by weight of~~ homopolymers and copolymers of acrylic acid crosslinked with a polyalkenyl polyether is mixed into 99.75% by weight of a non-abrasive solution comprising an aqueous solution of ammonia, the homopolymers and copolymers of acrylic acid crosslinked with a polyalkenyl polyether being present in an amount 0.25% by weight and the non-abrasive solution being present in an amount 99.75% by weight.

79. (Currently Amended) The planarizing machine of claim 78, wherein the non-abrasive lubricating planarizing solution has a viscosity of at least approximately 10 to approximately 100 cP ~~between 10-100 cP~~.

80.-83.(Cancelled)

84. (Previously Presented) The planarizing machine of claim 61, wherein the lubricating planarizing solution further comprises glycerol mixed into a non-abrasive solution comprising an aqueous solution of ammonia.

85. (Currently Amended) The planarizing machine of claim 84, wherein the lubricating planarizing solution has a viscosity of at least approximately 10 to approximately 20 cP ~~between 10-20 cP~~.

86. (Previously Presented) The planarizing machine of claim 61, wherein the lubricating planarizing solution further comprises 10% by weight of glycerol mixed into 90% by weight of a non-abrasive solution comprising an aqueous solution of ammonia.

87. (Currently Amended) The planarizing machine of claim 86, wherein the lubricating planarizing solution has a viscosity of at least approximately 10 to approximately 20 cP ~~between 10-20 cP~~.

88. (Previously Presented) The planarizing machine of claim 61, wherein the lubricating planarizing solution further comprises polypropylene glycol mixed into a non-abrasive solution comprising an aqueous solution of ammonia.

89. (Currently Amended) The planarizing machine of claim 88, wherein the lubricating planarizing solution has a viscosity of at least approximately 10 to approximately 20 cP ~~between 10-20 cP~~.

90. (Previously Presented) The planarizing machine of claim 61, wherein the lubricating planarizing solution further comprises 5% by weight polypropylene glycol mixed into 95% by weight of a non-abrasive solution comprising an aqueous solution of ammonia.

91. (Currently Amended) The planarizing machine of claim 90, wherein the lubricating planarizing solution has a viscosity of at least approximately 10 to approximately 20 cP ~~between 10-20 cP~~.

92. (Previously Presented) The planarizing machine of claim 61, wherein the lubricating planarizing solution further comprises 10% by weight polypropylene glycol mixed into 90% by weight of a non-abrasive solution comprising an aqueous solution of ammonia.

93. (Currently Amended) The planarizing machine of claim 92, wherein the lubricating planarizing solution has a viscosity of at least approximately 10 to approximately 20 cP ~~between 10-20 cP~~.

94. (Previously Presented) The planarizing machine of claim 61, wherein the lubricating planarizing solution further comprises polyvinyl alcohol mixed into a non-abrasive solution comprising an aqueous solution of ammonia.

95. (Currently Amended) The planarizing machine of claim 94, wherein the lubricating planarizing solution has a viscosity of at least approximately 10 to approximately 20 cP ~~between 10-20 cP~~.

96. (Previously Presented) The planarizing machine of claim 61, wherein the lubricating planarizing solution further comprises 10% by weight of polyvinyl alcohol mixed into 90% by weight of a non-abrasive solution comprising an aqueous solution of ammonia.

97. (Currently Amended) The planarizing machine of claim 96, wherein the non-abrasive lubricating planarizing solution has a viscosity of at least approximately 10 to approximately 100 cP ~~between 10-100 cP~~.

98. (Previously Presented) The planarizing machine of claim 61, wherein the lubricating planarizing solution further comprises homopolymers and copolymers of acrylic acid crosslinked with a polyalkenyl polyether mixed into a non-abrasive solution comprising an aqueous solution of ammonia.

99. (Currently Amended) The planarizing machine of claim 98, wherein the lubricating planarizing solution has a viscosity of at least approximately 10 to approximately 100 cP ~~between 10-100 cP~~.

100. (Previously Presented) The planarizing machine of claim 61, wherein the lubricating planarizing solution further comprises 0.25% by weight of homopolymers and copolymers of acrylic acid crosslinked with a polyalkenyl polyether mixed into 99.75% by weight of a non-abrasive solution comprising an aqueous solution of ammonia.

101. (Currently Amended) The planarizing machine of claim 100, wherein the lubricating planarizing solution has a viscosity of at least approximately 10 to approximately 100 cP ~~between 10-100 cP~~.

102. (Previously Presented) The planarizing machine of claim 61, wherein the lubricating planarizing solution further comprises ethylene oxide polymers mixed into a non-abrasive solution comprising an aqueous solution of ammonia.

103. (Currently Amended) The planarizing machine of claim 102, wherein the lubricating planarizing solution has a viscosity of at least approximately 10 to approximately 100 cP ~~between 10-100 cP~~.

104. (Previously Presented) The planarizing machine of claim 61, wherein the lubricating planarizing solution further comprises 0.25% by weight of ethylene oxide polymers mixed into 99.75% by weight of a non-abrasive solution comprising an aqueous solution of ammonia.

105. (Currently Amended) The planarizing machine of claim 104, wherein the lubricating planarizing solution has a viscosity of at least approximately 10 to approximately 100 cP ~~between 10-100 cP~~.